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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,819	08/17/2006	Hiroyuki Yonehara	2006_0950A	2384

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EXAMINER	
SANTIAGO, MARICELI	

ART UNIT	PAPER NUMBER
2879	

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10/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,819	YONEHARA ET AL.	
	Examiner	Art Unit	
	Mariceli Santiago	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *17 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7,8 and 11-13* is/are rejected.

7)☒ Claim(s) *5,6,9 and 14-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/17/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Receipt of the Amendment, filed on August 17, 2006, is acknowledged.

Claims 1-19 are pending in the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iketani (JP 2004-962215).

Regarding claim 1, Iketani discloses a method of manufacturing a display panel, the method comprising the steps of forming a material layer on a substrate (P); and heating and baking the material layer formed on the substrate which is placed on a supporting bed (Abstract), wherein the supporting bed includes a first supporting bed (21B) and a second supporting bed (24) placed on the first supporting bed, and wherein the substrate is placed on the second supporting bed such that the second supporting bed exists around the substrate during the heating and baking step for heating and baking.

Iketani further teaches the thermal expansion of the supporting bed, both the first supporting bed and the second supporting bed, being made of a ceramic material having a coefficient of thermal expansion almost equal to the material forming the substrate. Iketani fails to exemplify the limitation of a difference in thermal expansion coefficient between the second

supporting bed and the substrate is set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate.

However, given that the second supporting bed is the closest to the substrate, it would have been within the capabilities of one skilled in the art to provide for a difference of thermal expansion between the second supporting bed and the substrate being set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate in order to prevent positional deviation and damage of the substrate due to difference in temperature, as an obvious matter of design engineering.

Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to maintain a difference in thermal expansion coefficient between the second supporting bed and the substrate set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate in order to prevent positional deviation and damage of the substrate due to difference in temperature.

Regarding claim 2, Iketani discloses a method wherein the second supporting bed is a bar-like member placed on the first supporting bed.

Regarding claim 4, Iketani discloses a method wherein at least one of the first and the second supporting beds includes a movement suppressing means (25) for suppressing movement of the second supporting bed on the first supporting bed.

Regarding claim 8, Iketani discloses a supporting bed on which a substrate (P) to be used in a display panel is placed for being heated and baked, the supporting bed comprising: a first supporting bed (21B); and a second supporting bed (24) placed on the first supporting bed, and wherein the second supporting bed has a structure such that when the substrate is placed on the second supporting bed, the second supporting bed exists around the substrate

Iketani further teaches the thermal expansion of the supporting bed, both the first supporting bed and the second supporting bed, being made of a ceramic material having a coefficient of thermal expansion almost equal to the material forming the substrate. Iketani fails to exemplify the limitation of a difference in thermal expansion coefficient between the second supporting bed and the substrate is set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate.

However, given that the second supporting bed is the closest to the substrate, it would have been within the capabilities of one skilled in the art to provide for a difference of thermal expansion between the second supporting bed and the substrate being set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate in order to prevent positional deviation and damage of the substrate due to difference in temperature, as an obvious matter of design engineering.

Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to maintain a difference in thermal expansion coefficient between the second supporting bed and the substrate set smaller than a difference in thermal expansion coefficient between the first supporting bed and the substrate in order to prevent positional deviation and damage of the substrate due to difference in temperature.

Regarding claim 11, Iketani discloses a supporting bed wherein the second supporting bed is a bar-like member placed on the first supporting bed.

Regarding claim 13, Iketani discloses a supporting bed wherein at least one of the first and the second supporting beds includes a movement suppressing means (25) for suppressing movement of the second supporting bed on the first supporting bed.

Claims 3, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iketani (JP 2004-962215) in view of Ritter et al. (US 5,984,748).

Regarding claims 3, 7 and 12, Iketani fails to disclose the second supporting bed being made of metal plate containing titanium. Ritter discloses a method of fabricating a flat panel device provided with supporting alignment members (120) made of a metal material containing titanium having a coefficient of thermal expansion substantially equal to a glass substrate of the flat panel device. It is considered within the capabilities of one skilled in the art the selection of a material based on its known suitability for an intended application as an obvious matter of design engineering. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to use titanium as a material for the second supporting bed, since the selection of known materials for a known purpose is within the skill of the art.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iketani (JP 2004-962215) in view of Yonehara et al. (JP 2003-051251).

Regarding claim 10, Iketani fails to disclose the limitation of the second supporting bed having bumps and dips. However, Yonehara discloses a supporting bed (250) provided with bumps and dips (250) in order to maintain temperature uniformity of a substrate placed over the supporting bed during a heating process. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the bumps and dips of the supporting bed disclosed by Yonehara in the supporting bed of Iketani in order to maintain temperature uniformity of a substrate placed over the supporting bed during a heating process.

Allowable Subject Matter

Claims 5-6, 9 and 14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 5 and 14, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claims 5 and 14, and specifically comprising the limitation of the second supporting bed is split into a plurality of beds, and during the heating and baking step a sheet of the substrate straddling the plurality of the second supporting beds are heated and baked, wherein the second supporting beds are regulated such that thermally expanding directions of the respective second supporting beds agree with or approximate to a thermally expanding direction of the substrate.

Regarding claim 6, claim 6 is allowable for the reasons given in claim 5 because of its dependency status from claim 5.

Regarding claims 15-19, claims 15-19 are allowable for the reasons given in claim 14 because of their dependency status from claim 14.

Regarding claim 9, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 9, and specifically comprising the limitation of the first supporting bed has a groove on its surface, on which the second supporting bed is placed, and the second supporting bed is formed of thin plate shaping along the surface of the first supporting bed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Mariceli Santiago/
Primary Examiner, Art Unit 2879